



ORT1448.ST25.txt  
SEQUENCE LISTING

<110> Qin, Ning  
Codd, Ellen  
D'Andrea, Michael

<120> HUMAN VOLTAGE GATED SODIUM CHANNEL BETA 1A SUBUNIT AND METHODS OF  
USE

<130> ORT-1448

<140> 09/875,456

<141> 2001-06-06

<160> 16

<170> PatentIn version 3.3

<210> 1

<211> 27

<212> DNA

<213> Artificial

<220>

<223> Oligonucleotide primer

<400> 1

ccatccatac acgactcact ataggc

27

<210> 2

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Oligonucleotide primer

<400> 2

tggaccccttcc gccagaaggg cactg

25

<210> 3

<211> 24

<212> DNA

<213> Artificial

<220>

<223> Oligonucleotide primer

<400> 3

ctggaggagg atgagcgctt cgag

24

<210> 4

<211> 21

<212> DNA

<213> Artificial

<220>

<223> Oligonucleotide primer

<400> 4

ctattccggcc acctggacgc c

21

<210> 5

<211> 18

<212> DNA

<213> Artificial

<220>

<223> Oligonucleotide primer

<400> 5

gtgtctgaga tcatgatg

18

<210> 6

<211> 30

<212> DNA

<213> Artificial

<220>

<223> Oligonucleotide primer

<400> 6

gccatgggga ggctgctggc ctttgtggc

30

<210> 7

<211> 20

<212> DNA

## ORT1448.ST25.txt

<213> Artificial  
 <220>  
 <223> Oligonucleotide primer  
 <400> 7  
 gtgtgcctgc agctgctcaa 20  
 <210> 8  
 <211> 14  
 <212> PRT  
 <213> Artificial  
 <220>  
 <223> Synthetic Construct  
 <400> 8  
 Arg Trp Arg Asp Arg Trp Gln Ala Val Asp Arg Thr Gly Cys  
 1 5 10  
 <210> 9  
 <211> 13  
 <212> PRT  
 <213> Artificial  
 <220>  
 <223> Synthetic Construct  
 <400> 9  
 Cys Val Pro His Arg Arg Ser Gly Tyr Arg Thr Gln Leu  
 1 5 10  
 <210> 10  
 <211> 18  
 <212> DNA  
 <213> Artificial  
 <220>  
 <223> Oligonucleotide primers for Northern blot analysis 18  
 <400> 10  
 tcaaaaggatg cctgtccc  
 <210> 11  
 <211> 19  
 <212> DNA  
 <213> Artificial  
 <220>  
 <223> Oligonucleotide primers for Northern blot analysis  
 <400> 11  
 tcaaaaccaca ccccgaaaa 19  
 <210> 12  
 <211> 807  
 <212> DNA  
 <213> Homo sapiens  
 <400> 12  
 atggggaggc tgctggcctt agtggtcggc gcggcactgg tgcctcagc ctgcggggc 60  
 tgcgtggagg tggactcggc gaccgaggcc gtgtatggg tgaccttcaa aattcttgc 120  
 atctcctgca agcgccgcag cgagaccaac gctgagacct tcaccgagtg gaccttccgc 180  
 cagaaggcga ctgaggagtt tgtcaagatc ctgcgtatg agaatgaggt gttcagctg 240  
 gaggaggatg agcgcttcga gggccgcgtg gtgtgaaatg gcagccgggg caccaagac 300  
 ctgcaggatc tgtctatctt catcaccaat gtcacctaca accactcggg cgactacgag 360  
 tgccacgtct accgcctgt cttttcgaa aactacgagc acaacaccag cgtcgtcaag 420  
 aagatccaca ttgaggtagt ggacaaagggt gagtgggtg ctgcctgccc ctttaccgtc 480  
 accccaccggc gagccagatg gaggacaga tggcaggcag tggacaggac aggctggctc 540  
 tgcctggc cagccaaaccg cccacagcag cgggctgagg gggagggggag cagccctcc 600  
 tgcccactcc agctctggcc tctgttctc tccagccac ggagaggtca aagcatgcct 660  
 gtccccccaca gacgctccgg gtacagaacc cagctctgtc acctgtgctg tatgacctct 720  
 ggcagggtgcc ttctgtctt gagccaaagg gttgtccctgg gcttgcccg gataataatc 780  
 cgatgtgttt ctcgggtgt ggtttga 807  
 <210> 13  
 <211> 974  
 <212> DNA  
 <213> Homo sapiens  
 <400> 13

## ORT1448.ST25.txt

gccatgggga	ggctgctggc	cttagtggc	ggcgcggcac	tggtgtcctc	agcctgcggg	60
ggctgcgtgg	agggtggactc	ggagacccgag	ggcgtgtatg	ggatgacctt	caaaaattctt	120
tgcatctcct	gcaaggcgg	cagcagacc	aacgctgaga	ccttcaccga	gtggaccc	180
cggcagaagg	gcactgagga	gtttgtcaag	atccgtcgct	atgagaatga	ggtgttgag	240
ctggaggagg	atgagcgtt	cgagggccgc	gtgggtggaa	atggcagccg	gggcacccaa	300
gacgtcagg	atctgtctat	cttcatcacc	aatgtcacct	acaaccactc	gggcgactac	360
gaggtccacg	tctaccgcct	gctttcttc	gaaaactacg	agcacaacac	cagcgtcg	420
aagaagatcc	acattgaggt	agtggacaaa	ggtgagtcgg	gtgtgcctg	ccccttacc	480
gtcacccacc	ggagagccag	atggagggac	agatggcagg	cagtggacag	gacaggctgg	540
ctctgtgcct	ggccagccaa	ccgcccacag	cagcgggctg	agggggaggg	gagcagcccc	600
tcctgcccac	tccagctctg	gcctctgtt	ctctccagcc	cacggagagg	tcaaagcatg	660
cctgtcccc	acagacgctc	cgggtacaga	accagctct	gtcacctgtg	ctgtatgacc	720
tctggcaggt	gccttctgtc	tctgagccaa	agggttgtcc	tggcttgcc	cgggataata	780
atccgatgtg	tttctcgggg	tgtggttga	gccattctc	catcatgggg	ttcatgagga	840
ttgagcagct	gcaggcacac	cctgcttcc	agcagagccct	tgcaggtgt	ggcgagggtg	900
gcggttctta	ctgttgagta	gctcagccct	gctgctctct	gtgggtatga	ggcaagagag	960
cgtgcgtgt	ttgg					974

&lt;210&gt; 14

&lt;211&gt; 268

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 14

Met	Gly	Arg	Leu	Leu	Ala	Leu	Val	Val	Gly	Ala	Ala	Leu	Val	Ser	Ser	
1					5				10					15		
Ala	Cys	Gly	Gly	Cys	Val	Glu	Val	Asp	Ser	Glu	Thr	Glu	Ala	Val	Tyr	
						20			25					30		
Gly	Met	Thr	Phe	Lys	Ile	Leu	Cys	Ile	Ser	Cys	Lys	Arg	Arg	Ser	Glu	
					35				40					45		
Thr	Asn	Ala	Glu	Thr	Phe	Thr	Glu	Trp	Thr	Phe	Arg	Gln	Lys	Gly	Thr	
					50				55					60		
Glu	Glu	Phe	Val	Lys	Ile	Leu	Arg	Tyr	Glu	Asn	Glu	Val	Leu	Gln	Leu	
					65				70					75		80
Glu	Glu	Asp	Glu	Arg	Phe	Glu	Gly	Arg	Val	Val	Trp	Asn	Gly	Ser	Arg	
					85				90					95		
Gly	Thr	Lys	Asp	Leu	Gln	Asp	Leu	Ser	Ile	Phe	Ile	Thr	Asn	Val	Thr	
					100				105					110		
Tyr	Asn	His	Ser	Gly	Asp	Tyr	Glu	Cys	His	Val	Tyr	Arg	Leu	Leu	Phe	
					115				120					125		
Phe	Glu	Asn	Tyr	Glu	His	Asn	Thr	Ser	Val	Val	Lys	Lys	Ile	His	Ile	
					130				135					140		
Glu	Val	Val	Asp	Lys	Gly	Glu	Ser	Gly	Ala	Ala	Cys	Pro	Phe	Thr	Val	
					145				150					155		160
Thr	His	Arg	Arg	Ala	Arg	Trp	Arg	Asp	Arg	Trp	Gln	Ala	Val	Asp	Arg	
					165				170					175		
Thr	Gly	Trp	Leu	Cys	Ala	Trp	Pro	Ala	Asn	Arg	Pro	Gln	Gln	Arg	Ala	
					180				185					190		
Glu	Gly	Glu	Gly	Ser	Ser	Pro	Ser	Cys	Pro	Leu	Gln	Leu	Trp	Pro	Leu	
					195				200					205		
Phe	Leu	Ser	Ser	Pro	Arg	Arg	Gly	Gln	Ser	Met	Pro	Val	Pro	His	Arg	
					210				215					220		
Arg	Ser	Gly	Tyr	Arg	Thr	Gln	Leu	Cys	His	Leu	Cys	Cys	Met	Thr	Ser	
					225				230					235		240
Gly	Arg	Cys	Leu	Leu	Ser	Leu	Ser	Gln	Arg	Val	Val	Leu	Gly	Leu	Pro	
					245				250					255		
Gly	Ile	Ile	Ile	Arg	Cys	Val	Ser	Arg	Gly	Val	Val					
					260				265							

&lt;210&gt; 15

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Rattus sp.

&lt;400&gt; 15

Met	Gly	Thr	Leu	Leu	Ala	Leu	Val	Val	Gly	Ala	Val	Leu	Val	Ser	Ser	
1					5				10					15		

## ORT1448.ST25.txt

Ala Trp Gly Gly Cys Val Glu Val Asp Ser Glu Thr Glu Ala Val Tyr  
 20 25 30  
 Gly Met Thr Phe Lys Ile Leu Cys Ile Ser Cys Lys Arg Arg Ser Glu  
 35 40 45  
 Thr Thr Ala Glu Thr Phe Thr Glu Trp Thr Phe Arg Gln Lys Gly Thr  
 50 55 60  
 Glu Glu Phe Val Lys Ile Leu Arg Tyr Glu Asn Glu Val Leu Gln Leu  
 65 70 75 80  
 Glu Glu Asp Glu Arg Phe Glu Gly Arg Val Val Trp Asn Gly Ser Arg  
 85 90 95  
 Gly Thr Lys Asp Leu Gln Asp Leu Ser Ile Phe Ile Thr Asn Val Thr  
 100 105 110  
 Tyr Asn His Ser Gly Asp Tyr Glu Cys His Val Tyr Arg Leu Leu Phe  
 115 120 125  
 Phe Asp Asn Tyr Glu His Asn Thr Ser Val Val Lys Lys Ile His Leu  
 130 135 140  
 Glu Val Val Asp Lys Gly Lys Trp Ser Leu Val Thr Leu Trp Gln Ala  
 145 150 155 160  
 Arg Trp Arg Asp Arg Trp Lys Glu Gly Asp Arg Leu Val Ser His Arg  
 165 170 175  
 Gly Gln Leu Thr Pro Arg Ser His Arg Gly Lys Asp Thr Pro Phe Leu  
 180 185 190  
 Val Leu Glu Thr Ser Ala Leu Gln His Thr Gly Gly Gln Ile Arg Thr  
 195 200 205  
 Pro Thr Pro Pro Pro Thr Asn Gly Met Cys Ile Gly Leu His Ser Cys  
 210 215 220  
 Cys Val Thr Ser Asp Gly Cys Ile Pro Ile Ser Glu Pro Gln Ala Cys  
 225 230 235 240  
 Pro Gln Gly Pro Glu Arg Ile Phe Cys Met Ala Cys Cys Val Ser Gln  
 245 250 255  
 Ala Gly Pro His Trp Arg Asp Val Gly Thr Tyr Leu Arg Pro Gln Trp  
 260 265 270  
 Glu

<210> 16  
 <211> 218  
 <212> PRT  
 <213> Homo sapiens  
 <400> 16

Met Gly Arg Leu Leu Ala Leu Val Val Gly Ala Ala Leu Val Ser Ser  
 1 5 10 15  
 Ala Cys Gly Gly Cys Val Glu Val Asp Ser Glu Thr Glu Ala Val Tyr  
 20 25 30  
 Gly Met Thr Phe Lys Ile Leu Cys Ile Ser Cys Lys Arg Arg Ser Glu  
 35 40 45  
 Thr Asn Ala Glu Thr Phe Thr Glu Trp Thr Phe Arg Gln Lys Gly Thr  
 50 55 60  
 Glu Glu Phe Val Lys Ile Leu Arg Tyr Glu Asn Glu Val Leu Gln Leu  
 65 70 75 80  
 Glu Glu Asp Glu Arg Phe Glu Gly Arg Val Val Trp Asn Gly Ser Arg  
 85 90 95  
 Gly Thr Lys Asp Leu Gln Asp Leu Ser Ile Phe Ile Thr Asn Val Thr  
 100 105 110  
 Tyr Asn His Ser Gly Asp Tyr Glu Cys His Val Tyr Arg Leu Leu Phe  
 115 120 125  
 Phe Glu Asn Tyr Glu His Asn Thr Ser Val Val Lys Lys Ile His Ile  
 130 135 140  
 Glu Val Val Asp Lys Ala Asn Arg Asp Met Ala Ser Ile Val Ser Glu  
 145 150 155 160  
 Ile Met Met Tyr Val Leu Ile Val Val Leu Thr Ile Trp Leu Val Ala  
 165 170 175  
 Glu Met Ile Tyr Cys Tyr Lys Lys Ile Ala Ala Ala Thr Glu Thr Ala  
 180 185 190

ORT1448.ST25.txt

Ala Gln Glu Asn Ala Ser Glu Tyr Leu Ala Ile Thr Ser Glu Ser Lys  
195 200 205  
Glu Asn Cys Thr Gly Val Gln Val Ala Glu  
210 215